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EXAMINER
HAMZA, FARUK

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Response to Amendment

1.   This action is responsive to the amendment filed on January 06, 2009.

Claims 1, 4, 7-9, 14, 21 and 23 have been amended. Claims 18-20 and 24-26

have been canceled. Claims 1-17 and 21-23 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

2.   Claims 1-17 and 21-23 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

As to claims 1, 14 and 21 recite "a method of identifying at least one node

close to a first node in a network". In line 5, these claims recite "comparing

distance from each of the first node" which implies there is more than one first

node. Such recitation makes the claims ambiguous. It is unclear to the examiner

what applicant meant by "the selection is made based on comparing distances

from each of the first node and the plurality of nodes to each one of a plurality of

global landmark nodes"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-2, 7-17 and 21-23 are rejected under 35 U.S.C. 102(e) as being

anticipated by Andrews et al. (U.S. Patent Number 7,020,698) hereinafter

referred as Andrews.

Andrews teaches the invention as claimed including a system and method

for locating a closest server in response to a client request via an interactive

distribution network such as the Internet (see abstract).

As the examiner best understands claim 1, Andrews teaches a method of

identifying at least one node close to a first node in a network, the method

comprising:

selecting a set of candidate nodes from a plurality of nodes based on

location information for the candidate nodes and the first node, wherein the

selection is made based on comparing distances from each of the first node and

the plurality of nodes to each one of a plurality of global landmark nodes

(abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting

closest content server based on distance from group of content server);

applying a clustering algorithm to the location information for the candidate

nodes and the first node (Column 12, 10-28, Andrews discloses using clustering

algorithm); and

identifying a subset of the set of candidate nodes closest to the first node based on results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As the examiner best understands claim 2, Andrews teaches the method of claim 1, wherein selecting a set of candidate nodes comprises:

comparing location information for the plurality of nodes to the location information for the first node to select the set of candidate nodes from the plurality of nodes closest to the first node (Column 4, lines 8-Column 5, lines 18).

As the examiner best understands claim 10, Andrews teaches the method of claim 1, further comprising:

determining distances to each of the subset of candidate nodes from the first node (Column 4, lines 8-Column 5, lines 18, Column 9, lines 34-Column 10, lines 63); and

selecting a closest node to the first node from the subset of candidate nodes based on the determined distances (Column 4, lines 8-Column 5, lines 18, Column 9, lines 34-Column 10, lines 63).

As the examiner best understands claim 11, Andrews teaches the method of claim 1, further comprising:

selecting a node from the subset of nodes based on at least one of distances to each of the subset of candidate nodes from the first node and quality

of service characteristics associated with the subset of nodes (Column 4, lines 8-Column 5, lines 18).

As the examiner best understands claim 12, Andrews teaches the method of claim 1, wherein the clustering algorithm is an algorithm operable to identify similarities between the location information for the first node and the candidate nodes (Column 12, lines 10-28).

As the examiner best understands claim 13, Andrews teaches the method of claim 12, wherein the clustering algorithm comprises at least one a min_sum, max_diff, order, inner product algorithm, k-means, principal component analysis, and latent semantic indexing (Column 12, lines 10-28).

As the examiner best understands claim 14, Andrews teaches a node in a network comprising:

means for selecting a set of candidate nodes from a plurality of nodes based on location information for the candidate nodes and a first node, wherein the selection is made based on comparing distances from each of the first node and the plurality of nodes to each one of a plurality of global landmark nodes (abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting closest content server based on distance from group of content server);

means for applying a clustering algorithm to the location information for the candidate nodes and the first node (Column 12, 10-28, Andrews discloses using clustering algorithm); and

means for identifying a subset of the set of candidate nodes closest to the first node based on the results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As the examiner best understands claim 15, Andrews teaches the node of claim 14, further comprising:

means for receiving the location information for the plurality of nodes and the first node (abstract, Column 4, lines 8-Column 5, lines 18); and

means for storing the location information for the plurality of nodes and the first node (Column 4, lines 8-Column 5, lines 18).

As to claim 16, Andrews teaches the node of claim 15, further comprising:

means for retrieving the location information for the plurality of nodes and the first node from the means for storing (Column 9, lines 9-60); and

means for comparing the location information for the plurality of nodes and the first node to select the candidate nodes (Column 9, lines 9-60).

As the examiner best understands claim 17, Andrews teaches the node of claim 14, further comprising means for transmitting a list of the subset of candidate nodes to the first node (Column 10, lines 64-Column 11, lines 28).

As the examiner best understands claim 21, Andres teaches computer software embedded on a computer readable medium, the computer software comprising instructions performing:

selecting a set of candidate nodes from a plurality of nodes based on location information for the candidate nodes and a first node, wherein the selection is made based on comparing distances from each of the first node and the plurality of nodes to each one of a plurality of global landmark nodes (abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting closest content server based on distance from group of content server);

applying a clustering algorithm to the location information for the candidate nodes and the first node (Column 12, 10-28, Andrews discloses using clustering algorithm); and

identifying a subset of the set of candidate nodes closest to the first node based on the results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As the examiner best understands claim 22, Andrews teaches the computer software of claim 21, wherein instructions performing selecting a set of candidate nodes comprises:

comparing location information for the plurality of nodes to the location information for the first node to select the set of candidate nodes physically close to the first node (Column 4, lines 8-Column 5, lines 18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 3-9 and 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Andrews as applied above, and further in view of Harvey et al.

(U. S. Pub No. 2004/0054807) hereinafter referred as Harvey.

        Andrews teaches the invention substantially as claimed including a system

and method for locating a closest server in response to a client request via an

interactive distribution network such as the Internet (see abstract).

        As to claim 3, Andrews teaches the method of claim 2.

        Andrews does not explicitly teach the claim limitation of distributed hash

table overlay network and storing location information in the distributed hash

table overlay network.

        However, Harvey teaches the claim limitation of distributed hash table

overlay network and storing location information in the distributed hash table

overlay network (abstract, P[0005]).

        It would have been obvious to the ordinary skill in the art at time of the

invention to modify Andrews by adding distributed hash table overlay network,

which would allow gathering of data from nodes and dissemination of information

to its participants. One would be motivated to do such to enhance system's

performance.

        As to claim 4, Harvey teaches the method of claim 3, further comprising:

the first node hashing the location information for the first node to identify a

location in the distributed hash table overlay network to store the location

information for the first node (abstract, P[0005]).

As to claim 5, Harvey teaches the method of claim 3, further comprising:

receiving the location information for the plurality of nodes at the node in

the distributed hash table overlay network (abstract, P[0005]); and

storing the received location information for the plurality of nodes at the

node in the distributed hash table overlay network (abstract, P[0005]).

As to claim 6, Harvey teaches the method of claim 5, further comprising:

retrieving the location information for the plurality of nodes and the first

node from stored location information at the node in the distributed hash table

overlay network (abstract, P[0005]); and

comparing the retrieved location information to select the set of candidate

nodes proximally located to the first node from the plurality of nodes (abstract,

P[0005]).

As to claim 7, Andrews teaches the method of claim 1.

Andrew does not explicitly teach the claim limitation of landmark vectors

for each of the first node and the plurality of nodes, the landmark vectors for each

of the first node and the plurality of nodes including distances measured to a

plurality of global landmark nodes and at least one local landmark node

proximally located to a respective one of the first node and the plurality of nodes.

However, Harvey teaches the claimed limitation of landmark vectors for

each of the first node and the plurality of nodes, the landmark vectors for each of

the first node and the plurality of nodes including distances measured to a plurality of global landmark nodes and at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes (abstract, P[0007,0082]).

It would have been obvious to the ordinary skill in the art at time of the invention to modify Andrews by adding functionality for determining landmark measurements, which would provide connection between nodes with higher performance and/or minimize cost. One would be motivated to do such to enhance system's performance.

As to claim 8, Harvey teaches the method of claim 7, wherein comparing location information for the plurality of nodes to the location information for the first node comprises:

comparing global landmark vector portions of the landmark vectors for the first node and the plurality of nodes (abstract, P[0007,0082]); and

selecting candidate nodes from the plurality of nodes having landmark vectors with a predetermined similarity to the landmark vector for the first node (abstract, P[0007,0082]).

As to claim 9, Harvey teaches the method of claim 7, wherein the at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes is one of on a routing path between the respective node and one of the plurality of global landmark nodes and within a predetermined distance to the respective node (abstract, P[0073]).

As to claim 23, Andrews teaches the computer software of claim 21.

Andrews does not explicitly teach the claim limitation of the location information for the first node and the plurality of nodes comprises distances measured from each of the first node and the plurality of nodes to a plurality of global landmark nodes and to at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes.

However, Harvey teaches the claim limitation of the location information for the first node and the plurality of nodes comprises distances measured from each of the first node and the plurality of nodes to a plurality of global landmark nodes and to at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes (P[0073,0079]).

It would have been obvious to the ordinary skill in the art at time of the invention to modify Andrews by adding functionality for determining landmark measurements, which would provide connection between nodes with higher performance and/or minimize cost. One would be motivated to do such to enhance system's performance.

Response to Arguments

5.   Applicant's arguments have been fully considered but they are not persuasive.

In the remarks applicant argues in substance that; A) Andrew does not teach selection is made based on comparing distances from each of a first node and a plurality of nodes to each one of a plurality of global landmark nodes.

In response to A) The newly added limitation made the claim ambiguous. It is unclear to the examiner what applicant meant by the limitation. Andrews teaches measuring distance from one client node to other nodes and based on the distance creating client cluster. The client clusters measure distance to the content servers. By comparing distance from client clusters to the content servers it selects the closest or best performing server (Column 4, lines 9-Column 5, lines 18) . According to the examiner's best understanding of the claim limitation interpreting Andrew's teaching of creating client cluster based on distance and selecting content server based on distance from the cluster to the server to be "selection is made based on comparing distances from each of a first node and a plurality of nodes to each one of a plurality of global landmark nodes". Therefore, teaching of Andrew meets the claim limitation.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

7.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Faruk Hamza whose telephone number is

571-272-7969. The examiner can normally be reached on Monday through

Friday.

        If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Saleh Najjar can be reached at 571-272-4006. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for unpublished applications is available through Private PAIR only. For more

information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 886-217-9197 (toll –free).

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